



Desk Study Report

Project Name: Bairds Business Park

Location: Grevatt's Lane, Littlehampton BN17 5RX

Client: James D Baird (Home Farm) Ltd.

Project ID: JT0642

Report Date: 10 September 2025

Report Issue: 1

SUMMARY

The site, which extends to 0.43 ha, comprises a vacant plot within an existing small industrial estate. It is proposed to redevelop the site with a 16,000sq ft commercial (B2) building.

Geological records indicate the site to be underlain by River Terrace Deposits over White Chalk Subgroup.

A desk study was carried out and indicates that the site has a history of agricultural use followed by industrial use since the early 2000s.

An Unexploded Ordnance (UXO) risk assessment was not included in our brief.

The preliminary conceptual site model site indicates that potentially contaminative activities have been carried out on the site and immediate surrounding areas. There is potential that the identified contaminants associated with these activities may have affected the soil and could pose unacceptable risks to the proposed development. It is recommended that a Phase 2 investigation is carried out to determine the nature and extent of any contamination and to assess the significance of the potential risks to human health, groundwater and the as-built environment.

This report has been prepared for the sole internal use and reliance of James D Baird (Home Farm) Ltd. and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Ltd. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The findings and opinions conveyed via this investigation report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Ltd. believes are reliable. Nevertheless, Southern Testing Laboratories Ltd. cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Southern Testing Laboratories Ltd. assumes no liability for any conditions not revealed in the records obtained in performance of the services in accordance with the limitations of the contract with the Client, or where variations occur between exploratory hole locations or below the depth of investigation.

The recommendations contained in this report are made in respect of the particular context of the investigation as described in the report and may not be appropriate to alternative development schemes. This report should be considered in its entirety and Southern Testing Laboratories Ltd. accepts no responsibility for and excludes liability in respect of any omission or alteration made by others, and any use of the report for any purpose other than that for which it was produced.

Author	M G Loxley BSc(Hons) MSc CGeol FGS		
Check / Review	R Jiagge BSc (Hons) MSc MEnvSc CSci FGS		

For and on behalf of Southern Testing Laboratories Limited

DOCUMENT HISTORY AND STATUS

Issue No.	Date	Purpose or Status	Author	Check / Review
1	10/09/2025	First issue	ML	RJ

TABLE OF CONTENTS

A	INTRODUCTION	1
1	Authority	1
2	Location	1
3	Proposed Construction	1
4	Object	1
5	Scope	1
B	DESK STUDY AND WALKOVER SURVEY	2
6	Desk Study	2
7	Site Walkover Survey	9
C	PRELIMINARY SITE MODELS	10
8	Conceptual Engineering Geological Ground Model	10
9	Conceptual Site Model	11
10	Conclusions and Recommendations	13

TABLE OF APPENDICES

APPENDIX A

Site Plan

APPENDIX B

Photographs

APPENDIX C

Phase 1 Desk Study – Historical Mapping

APPENDIX D

Phase 1 Desk Study – Environmental Database Search Results and Mapping

APPENDIX E

Risk Assessment Criteria –CIRIA C552

A INTRODUCTION

1 Authority

Our authority for carrying out this work is contained in an ST Consult Project Order form completed by James D Baird (Home Farm) Ltd., and dated 3rd September 2025.

2 Location

The site is located approximately 3.0 km west of Littlehampton railway station. The approximate National Grid Reference of the site is SU 99290 01360. The site location is indicated on Figure 1 within Appendix A.

3 Proposed Construction

It is our understanding that a planning application for submission to Arun Council is being prepared for the redevelopment of the 0.43 ha site with the construction of a 16,000sq ft commercial (B2) building and this report will support the planning application.

For the purposes of the contamination risk assessment, the proposed development land use is classified as Commercial/Industrial CLEA Model Ref [1] / C4SL Report Ref [2].

The gas sensitivity of the proposed development is rated as Low (commercial) CIRIA C665 Ref [3].

4 Object

This is a Phase 1 Desk Study and Walkover Survey report.

The purpose of the Phase 1 Desk Study is to determine sources of contamination, identify potential contaminants and allow the development of a conceptual understanding of the site to ensure that any intrusive investigation required addresses all the issues identified.

5 Scope

This report presents our desk study findings and our interpretation of these data.

A UXO risk assessment was not requested within our brief for the Phase 1 Desk Study.

The findings and opinions conveyed via this report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Ltd. believes are reliable. Nevertheless, Southern Testing Laboratories Ltd. cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

The investigation was conducted and this report has been prepared for the sole internal use and reliance of James D Baird (Home Farm) Ltd. and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Ltd. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The recommendations contained in this report are made in respect of the particular context of the investigation as described in the report and may not be appropriate to alternative development schemes. This report should be considered in its entirety and Southern Testing Laboratories Ltd. accepts no responsibility for and excludes liability in respect of any omission or alteration made by others, and any use of the report for any purpose other than that for which it was produced.

B DESK STUDY AND WALKOVER SURVEY

6 Desk Study

A desk study has been carried out. Reference has been made to the following information sources.

- Online Geological Maps Ref [6] & Ref [7]
- Online Hydrogeological Maps Ref [8]
- Historical Ordnance Survey Maps
- Environmental Databases
- BGS Online Historical Borehole Records Ref [9]
- Search on Local Authority Planning Portal for planning history
- MAGIC website mapping Ref [10]
- Environment Agency / Gov.UK Website Flood Risk Ref [11]
- UK Radon Ref [12] and BRE Radon Ref [13]
- Google Earth (for old aerial photographs)

The environmental databases search report compiled for this desk study contains site-specific environmental data drawn from data sets that comprise publicly available information together with data from third parties, some of which is under review. Accordingly, Southern Testing Laboratories Limited does not warrant its accuracy, reliability or completeness.

The full report is included in Appendix C and D, a summary of the salient features is included in the following sections of this report.

6.1 Geology

The British Geological Survey Map No 317/332 (Chichester and Bognor) indicates that the site geology consists of River Terrace Deposits over undifferentiated White Chalk Subgroup. The White Chalk Subgroup comprises the Lewes Nodular Chalk, Seaford Chalk, Newhaven Chalk, Culver Chalk and Portsdown Chalk Formations.

6.1.1 River Terrace Deposits

The River Terrace Deposits are of fluvial origin and were laid down by rivers when the climate was much wetter and cooler than at present. The terraces consist of sheets of gravel/sand and can include an overlying deposit of Brickearth (really an ancient alluvium). Some variability in soils is to be expected at junctions with the various terraces, as riverbanks existed there. The remains of these former riverbanks can be soft and silty or contain clay.

6.1.2 White Chalk Subgroup

The White Chalk outcrop in particular is frequently highly fractured and highly permeable, and usually has good infiltration characteristics. On the other hand, Chalk Head, highly weathered Chalk and Chalk under a low permeability superficial cover may have very poor infiltration characteristics.

Chalk is slightly soluble in water and, while it has excellent bearing properties when unweathered, this solubility can lead to deep weathering and softening, and the upper layers of chalk often have an irregular boundary with overlying strata

The Chalk may be softened by solution to a depth of 5 to 15 metres and bearing capacities and engineering properties improve with depth. Where there is an outcrop of impermeable soil overlying the chalk there may be a dramatically increased solution effect due to concentrated surface water flow to the Chalk close to the outcrop boundary.

Solution features are common in the Chalk, and these can present significant difficulties to development on affected sites.

The White Chalk Subgroup on this site comprises the Portsdown Chalk, Culver Chalk, Newhaven Chalk, Seaford Chalk and Lewes Nodular Chalk Formations (undifferentiated) A summary description of these formations is given below:

The Portsdown Chalk Formation is the uppermost formation of the White Chalk Subgroup in the south of England. This formation is characterised by white chalk with numerous thin marl seams and several well developed nodular flint bands. The lowest part contains several belts rich in inoceramid shell debris, as well as isolated marl seams and pairs of marl seams that likewise contain much shell debris. The highest part is termed the Studland Chalk Member. It is essentially marl free, with very large flints. Parts of the formation can be glauconitic.

The Culver Chalk Formation is typically a generally homogenous white chalk with regular bands of large flints and few or no marl seams. It is characterised by the predominance of regular vertical jointing as opposed to the inclined conjugate jointing that is a feature of the underlying Newhaven Chalk Formation.

The Newhaven Chalk Formation is characterised by firm white chalk with common marl seams and widely spaced flint bands, and by numerous inclined conjugate shear fractures, normally slickensided and frequently containing sheet flint.

The Seaford Chalk Formation comprises a fairly homogeneous white chalk with regular and conspicuous flint bands. These flints are commonly laterally very continuous and traceable over large distances. Some of the flints can be very large. A few marl seams are present within the lower parts of the formation.

The Lewes Nodular Chalk Formation is characterised by bands of orange-stained, hard, medium to very high density chalk interbedded with soft greyer low density chalk. There are some well-developed hardgrounds noted such as the Top Rock and Chalk Rock. A number of persistent marl and flint horizons are included within this formation. Fracturing is variable, although commonly steeply inclined and curvilinear in nature. Horizons of sub-horizontal sheet flints are also present.

6.2 Historical Borehole Records

A search of previous exploratory hole records both from the online British Geological Survey database [9] and Southern Testing in-house records, revealed four records within the near vicinity of this site from the BGS source and one previous STL ground investigation within 1km of the site.

The BGS website was accessed on 20th August 2025 and a summary of the records is presented in the table below.

BH Reference	Final Depth (mbgl)	Distance from site (m) & Direction	Remarks
SU90SE7 (22/7/1976)	15.5	0	GL to 0.6m Topsoil. 0.6 to 2.3m 'Drift' brown sandy clay. 2.3 to 3.2m 'Drift' grey sandy clay. 3.2 to 12.2m 'Upper Chalk' soft chalk. 2.6 to 3.5m 'Upper Chalk' chalk with some flints. Rest water level noted to be 1.84m bgl.
SU90SE9 (4/5/1979)	250	461/E	GL to 3.0m 'Brickearth' sandy topsoil. 3.0 to 16.0m 'Upper Chalk' soft chalk. 16.0 to 117m 'Upper Chalk' chalk and flints. 117 to 250m 'Middle and Lower Chalk'. Rest water level noted to be 1.5m bgl.

BH Reference	Final Depth (mbgl)	Distance from site (m) & Direction	Remarks
SU90SE35 (Sep 1981)	5.2	648/W	GL to 0.2m Soil. 0.2 to 2.2m 'Brickearth' Clay mottled with fine sand and chalk granules. 2.2 to 3.2m 'Raised Beach Deposits' silt very sandy with pebbles of chalk and some flint. 3.2 to 3.9m 'Raised Beach Deposits' very clayey sandy gravel. 3.9 to 5.2m 'Upper Chalk' weathered rubbly with sand near top. Groundwater not struck.
SU90SE39 (Sep 1981)	3.5	625/SE	GL to 0.2m Soil. 0.2 to 1.1m 'Brickearth' silt clayey mottled with lignite granules and a few flint pebbles. 1.1 to 2.6m 'Raised Beach Deposits' very clayey sandy gravel. 2.6 to 3.5m 'Upper Chalk' weathered sandy and silty at top nodular flints. Groundwater strike noted at 1.7m bgl.
J14124	1.0 to 3.0 Three Trial Pits	934/NE	GL to 0.2m Topsoil. 0.2 to 1.0m Brown slightly sandy SILT with rare angular flint. 1.0 to 3.1m Orangish brown mottled grey slightly clayey silty SAND, with lenses of sandy clay, very sandy clay and rare angular flint. Groundwater seepage/inflow at 2.8m bgl. Trial pit unstable below 2.1m bgl.

6.3 Geological Hazards and Mining Activities

Data from various sources relating to potential geological hazards at the site are summarized below. The Hazard Potentials listed for the BGS data are as presented in the Envirocheck report, derived from various generic BGS sources, **which are not considered as site-specific**. It is important that this information is considered in context of the actual site topography, ground conditions encountered during future investigation, and development proposals.

Data Source	Hazard	Hazard Potential to Site	Remarks
BGS	Potential for Collapsible Ground Stability Hazard	Low	
	Potential for Compressible Ground Stability Hazard	No Hazard	
	Potential for Ground Dissolution Stability Hazard	Very Low	
	Potential for Landslide Ground Stability Hazard	Very Low	
	Potential for Running Sand Ground Stability Hazard	Low	
	Potential for Swelling or Shrinkage Clay Ground Stability Hazard	Low	

Data Source	Hazard	Hazard Potential to Site	Remarks
	Shallow Mining Hazard	No Hazard	None recorded within 1km of the site.
	BGS recorded mineral site	No Hazard	None recorded within 1km of the site.
ARUP [Ref [14]]	Mining Instability	No Hazard	None recorded within 1km of the site.
PBA	Natural & Mining Cavities	No Hazard	None recorded within 1km of the site.

6.4 Radon Risk

With reference to the Envirocheck report, UK Radon Ref [12] and BRE Radon Ref [13] guidance, no radon protection is required on this site.

6.5 Hydrology and Hydrogeology

Data from the Environment Agency and other information relating to controlled waters is summarised below.

Data		Remarks	Possible Hazard to/from Site (Y/ N)
Aquifer Designation	Superficial Deposits	Secondary A Aquifer	Y
	Bedrock	Principal Aquifer	Y
Groundwater Vulnerability		Secondary Superficial Aquifer - High Vulnerability Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High and Bedrock Flow: Well Connected Fracture	Y
Abstractions	Surface Water	From Elmer Rife 130m S of site. Operator: Baird Farming Partnership, Licence Number 10/41/411016 for General Agriculture: Spray Irrigation	N
	Groundwater	Groundwater 29m S of site. Operator: A Baird, A Baird, J Baird, Nicholas Parker, Brachers Llp, Licence Number 10/41/542009 for General Farming and Domestic use.	Y
Source Protection Zones		None within 1km of the site.	N
Surface Watercourses		Ditch east of Grevatt's Lane along the eastern boundary of the site.	Y
Groundwater Flood Risk		Potential for groundwater flooding of property situated below ground level.	Y
Surface Water Flood Risk*		The site is shown adjacent to an area mapped as being at risk.	N
Marine / Fluvial Flood Risk*		The site is shown within an area mapped as being at risk.	Y
Reservoir Flood Risk*		The site is not shown within an area mapped as being at risk.	N

Data	Remarks	Possible Hazard to/from Site (Y/ N)
Discharge Consents	12m E of site: Discharge of other matter to surface water from Agricultural Storage Barn, Hobbs New Barn. Operator: John L. Baird (Home Farm) Ltd. Reference: S02228. 16m E of site: Sewage discharges - final/treated effluent - not water company to freshwater stream/river (ditch leading to river) from domestic property (single) (incl farm house). Operator: John L Baird (Home Farm) Ltd. Reference P12305.	N

* These sections are provided for information only, this report does not constitute a formal flood risk assessment and specialist advice should be sought in relation to potential flooding issues.

Two of the BGS borehole records, see Section 6.2, give historical rest water levels of 1.85m bgl and 1.5m bgl, for SU90SE7 (on site) and SU90SE9 (461m to the east) respectively. The BGS borehole record for SU90SE7 identifies the borehole to be located at Hobb's New Barn. The location and status of borehole SU90SE7 (which is also assumed to be the groundwater abstraction noted in the table above and reported to be located 29m south of the site) was not established during the site walkover survey.

6.6 Historical Ordnance Survey Maps

Copy extracts of historical Ordnance Survey plans dating from 1876 to 2025 were obtained and are presented in Appendix C. A summary of the salient features is presented below.

6.6.1 The Site

The earliest OS map of 1876 shows the site as farmland, with a track forming the northern and eastern site boundaries. The southernmost part of the site straddles a former field boundary, which is no longer present by the 1933/37 edition of the OS map. The 1982 map shows that the eastern part of the site is occupied by a large structure (barn, with no significant changes shown on the subsequent editions).

6.6.2 Off Site

The earliest OS map of 1876 shows the immediate surrounding areas as farmland. The 1898 map shows a building (Hobb's New Barn), with a pump, approximately 30m north east of the site. The 1933/37 edition of the OS map shows some consolidation of the fields to the west of the site and the establishment of deciduous woodland strips along field boundaries to the east of the site. Between 1962/67 and 1974 there appears to be a consolidation of various smaller fields to the east and south of the site. The 1993 edition of the OS map shows development of agricultural units immediately to the south of the site (assumed to be poultry houses). A progressive development of the commercial and industrial units around the site is shown from the 1990s onwards.

6.7 Environmental Databases

Data Source	Distance (m)	Direction	Details	Possible Hazard to Site (Y/N)
Historical Industrial Land Use	A number of historical industrial land uses are listed within 1km of the site. However, only those considered relevant within 500m of the site are listed below.			
	325	S	Unknown Filled Ground (Pond, marsh, river, stream)	N
	381	S	Unknown Filled Ground (Pond, marsh, river, stream)	

Data Source	Distance (m)	Direction	Details	Possible Hazard to Site (Y/N)
Current Industrial Land Use	A number of current industrial land uses are listed within 1km of the site. However, only those considered relevant within 250m of the site are listed below.			
	0	on-site	Arun Waste Services (Active)	Y
	0		Grab & Tip Littlehampton Ltd (Inactive)	Y
	0		Robinsons Haulage Sussex Ltd (Active)	Y
	0		Performance Tuning Services (Active)	Y
	0		Arun Engineering (Inactive)	Y
	13		Contemporary Designs (Inactive)	Y
	19	S	Inspired Engineering Ltd (Inactive)	Y
	33	E	Stuart Lyons Haulage Ltd (Active)	Y
	72	E	Vertex Joinery (Active)	Y
	80	NW	D J B Projects (Inactive)	Y
	149	SW	Wadey Commercial Services Ltd (Active)	Y
	149	N	Geoff Burse Trailers Ltd (Inactive)	Y
	219	N	Stuart Lyons Haulage Workshop (Inactive)	Y
Current & Historical Landfills	-	-	None within 1km of the site.	N
Fuel Sites	-	-	None within 1km of the site.	N
Pollution Incidents	0		Fire on 30th August 2024, Environment Agency incident reference 2302089. Impacts: Atmospheric Pollutants and Effects: smoke, and Contaminated Water: firefighting run-off. Categorised as: Water Impact: Category 3 - Minor Incident Air Impact: Category 1 - Major Incident Land Impact: Category 3 - Minor Incident	Y
IPPC/LAPPC Authorisations	97	SW	Grab And Tip (Littlehampton) Limited, Licence Number: 404366 (Expired), dated March 2018. Site Category: Treatment of waste to produce soil <75,000 tonnes per year	N
	211	N	Arun Waste Services Limited, Licence Number: 103634 (Issued), dated January 2012. Site Category: Not Supplied	
	911	NE	South Coast Skips Limited, Licence Number: 19741 (Issued), dated September 1996. Site Category: Household, Commercial And Industrial Transfer Stations	
Hazardous Substances Consents	-	-	None within 1km of the site.	N
Sensitive Land Uses	535	W	Nitrate Vulnerable Zone	N

A number of potential sources of contamination from current or historical industrial activities have been recorded on the site and its immediate environs within the environmental database.

Possible hazards are associated with former agricultural uses (including poultry sheds), the waste treatment (soil / demolition and construction material processing), and engineering/motor mechanic, haulage workshops activities. Potential hazards associated with these include: asbestos, metals PAH's, petroleum hydrocarbons, VOC, SVOC and Pesticides. The potential presence of made ground might be expected. Depending on the nature, thickness and composition of any made ground material this could be a source of ground gas.

The fire in August 2024 and associated firefighting and subsequent demolition of the damaged building had the potential to mobilise any existing contamination or hazardous material such as asbestos associated with the former building fabric and PFOS/PFAS associated with firefighting chemicals used.

6.8 Planning Application History

A search of Arun District Council's planning portal (<https://www.arun.gov.uk/planning-building-control-site-searches> - accessed 20th August 2025); revealed a number of planning applications relating to the site and the wider Bairds Business Park. Pertinent applications are summarised in the table below. It is stressed that this search cannot be an exhaustive one by the nature of the search engine provided on the Arun District Council website.

Application Number	Application Date	Proposal Details / Comments	Decision
DS/00206/2024	02/09/2024	Alleged dangerous structure - integrity of building damaged by fire.	Undecided
CM/26/20/AG	03/08/2020	Application for prior notification for a proposed portal framed barn	No Objections
CM/29/19/PD	15/05/2019	Notification for Prior Approval under Class R for the Change of Use of Agricultural Building to Storage and Distribution (B8).	No Objections
CM/21/15/WS	20/10/2015	Construction & Operation of a Waste Transfer Station & Materials Recycling Facility at Baird's Business Park. This is a County Matter & will be determined by West Sussex County Council.	No Objections
CM/2/11/	22/02/2011	Change of use of existing factory unit 7 from B1/B8 to a waste transfer and recycling station. This is a County Matter application & will be determined by West Sussex County Council	No Objections
CM/3/09/CLE	06/02/2009	Application for a Lawful Development Certificate for an Existing use of the manufacture of concrete products	Approved
CM/26/04/BR	17/12/2004	Portal frame building (Re-submission following CM/21/04/BR)	Passed with conditions
CM/15/04/	13/07/2004	Demolition of 6 existing commercial buildings comprising 1931m ² and erection of one new commercial building comprising 1430m ² for part sui generis use (930m ²) for display and storage of fireplaces and ceiling cornices and small business units within Use Class B1/B8 (500m ²) - (This application is a Departure from the Development Plan)	Approved with conditions
CM/29/01/CLE	25/10/2001	Application for a Certificate of Lawfulness for an existing use - use of buildings for mixed use storage B8 and workshop B1	Approved
CM/2/87	03/02/1987	Outline Application for the erection of a new storage building (to be used for storing, grading and sterilizing bulbs and similar crops)	Approved with conditions

6.9 Ground Gas Risk

There are no current or historical landfill sites within 1km of the site. There are two infilled ground features identified at 325m and 381m to the south of the site relating to the removal of field boundaries and consolidation of multiple smaller fields to form a single larger field. While the nature of any fill materials are unknown the likelihood that infilled materials from over 40 years ago will still be actively gassing is very low. Any infilled former ditches are over 250m from the site and are these former field boundaries are also separated from the site by the Ryebank Rife stream. Any gas risk that might arise from potential made ground off site is considered very low to negligible at this stage.

Given the use of the site for waste treatment processes, production of soil and recycling of construction and demolition materials, and the presence of stockpiles of soil and poor quality recycled aggregate containing some deleterious materials such as plastic, wood and metalware the presence of made ground might be expected. Depending on the nature, thickness and composition of any made ground material, this could be a source of ground gas.

6.10 UXO Risk Management

The possibility of unexploded ordnance (UXO) being encountered on a site falls within the category of a potentially significant risk and should be addressed as a legal duty under the Construction (Design and Management) Regulations by the Client as early as possible in a project.

The CIRIA publication C681 Ref [17] has been developed to provide a consistent framework for the management of potential risks posed by UXO during site investigation and groundwork phases of construction. The process adopts a tiered approach, divided into four distinct stages; Preliminary risk assessment, Detailed risk assessment, Risk mitigation and Implementation.

The agreed scope of work did not allow for either a preliminary or detailed UXO risk assessment.

7 Site Walkover Survey

7.1 General Site Description and Boundaries

The site comprises a vacant plot on a small industrial estate to the south of the A259 trunk road at Climping West Sussex. The site formerly held the premises of a waste services site which we understand was destroyed by fire in August 2024. The site is partly surfaced in concrete and partly unpaved with a number of soil and aggregate stockpiles present, predominantly in the southern half of the site. The site is bounded to the north by a concrete surfaced yard area 'Woody's Yard' in the north-west and by the access road to the site and beyond to the north-east. Beyond the site to the south-west is a large soil stockpile which encroaches onto the southern part of the site and to the south east a business, DJB projects and concrete yard (Architectural Louvre manufacturers and installers). To the east is the access road to DJB beyond which is agricultural land and to the west, beyond an access road, a continuation of the Industrial Park including a groundworks contractor, concrete batching plant and a haulage depot.

7.2 Topography and Drainage

The site is relatively flat and level, and at an elevation of around 3m AOD based on Google Earth imagery accessed 19th August 2025. There are no drainage features on site. A number of stockpiles of recycled aggregate and soils are present, including a large stockpile of vegetated soil situated predominantly on the adjacent land to the immediate south but which also encroaches onto the site itself across the southern boundary.

7.3 Vegetation

There is no significant vegetation on site other than self-sown weeds in some of the older stockpiles. Beyond the access road to the east is a strip of Oak woodland beyond which is agricultural land.

7.4 Buildings and Land Use on Site and Nearby

There are no buildings present on site. The site formerly held the premises of a waste services site which we understand was destroyed by fire in August 2024. News articles available on the internet indicate the former building may have had a partial asbestos cement roof. There are no permanent buildings on land immediately adjacent. To the south is the premises of DJB Projects which is a linear metal framed building. A number of soil and recycled

aggregate stockpiles are situated on site, covering approximately half the site area. A significant soil stockpile, perhaps 6m high occupies land to the immediate south, but encroaches onto the southern part of the site. Where the materials are exposed, this appears to be soil materials. The remaining stockpiles are smaller and are predominantly poor quality recycled aggregate containing mostly brick and concrete but also some deleterious materials such as plastic, wood and metalware.

7.5 Inaccessible Site Areas

No areas of the site were inaccessible.

7.6 Site Photographs

A series of photographs showing the site in general and details of the various soil and material stockpiles is included in Appendix B.

C PRELIMINARY SITE MODELS

8 Conceptual Engineering Geological Ground Model

From the desk study information and walkover undertaken at this site the following conceptual ground model has been formulated.

Data Source	Comments
Geology	The recorded soils beneath the site comprise White Chalk Subgroup with a superficial covering of River Terrace Deposits. The River Terrace Deposits are anticipated to be in the region of 3-5m in thickness. Made ground should be expected to be present on site. In general, it is anticipated that conventional foundations such as trench fill, strip or isolated pad and beam foundations would be expected to be suitable for the development, subject to the findings of an intrusive site investigation.
Former Site Use	The site remained undeveloped from the earliest available map until the construction of an agricultural structure by 1982. Waste treatment permits were issued in January 2012 and March 2018 and the site was used to process and stockpile soil material. The presence of some Made Ground should be anticipated.
Groundwater	The BGS borehole record for the well at Hobb's New Barn recorded rest water level at 1.85m bgl in July 1976. Groundwater levels can vary considerably from season to season and year to year, potentially rising close to the ground surface in wet or winter weather, and falling in periods of drought. Long-term monitoring from boreholes or standpipes is required to assess the groundwater regime.
Surface Water	The site is located in an area of very low risk from surface water flooding and with potential flooding of property below ground level by groundwater. Suitable surface water drainage will need to be considered for the proposed development.
Potential Geo-hazards	Swelling and shrinkage issues of clay soils could be a hazard. However, this could be negligible depending the thickness and the amount of non-cohesive material in any clay soil encountered.

On the basis of the available information the geotechnical categorization for the proposed structure(s) is considered to fall within Geotechnical Category 2 – Conventional structure with no exceptional risk or difficult ground or loading conditions Eurocode 7 Ref [19].

9 Conceptual Site Model

In the context of this report, the conceptual model summarises the potential pollutant linkages identified for the site and forms the basis of the risk assessment for the site. The preliminary model comprises the potential sources of contamination, receptors that could be harmed and exposure pathways identified from the desk study and walkover survey. These potential linkages form the basis upon which the investigation is designed and reported.

9.1 Potential Sources of Contamination

The site has a history of agricultural and industrial use and is located within a small industrial estate set in a predominantly rural area.

A number of potentially contaminative uses have been identified, both on site and in the locality.

Potential contaminants associated with these uses have been compiled from DoE industry profiles and our experience of such sites.

The likely hazard to site has been evaluated based on the UK CIRIA C552 approach (see Appendix E for details).

9.1.1 On-Site Sources

Potential Source		Potential Contaminants	Likely hazard to Site
Historic use of the site	General use as agricultural land	Metals/metalloids, PAHs, petroleum hydrocarbons, asbestos, pesticides and herbicides	Very Low
	Potential Made Ground associated with construction and demolition of previous structures	Metals/metalloids, PAHs, petroleum hydrocarbons and asbestos	Low to Moderate
Recent use of the site	Soil and C&D material processing and storage	Metals/metalloids, PAHs, petroleum hydrocarbons, VOCs, SVOCs, asbestos	Moderate to High
	Chemicals used to fight fire on site.	PFOS/PFAS	Low to Moderate
Groundwater and/or surface water		Heavy Metals, Pesticides/Herbicides, PAHs, Petroleum Hydrocarbons	Low to Moderate
Radon		Not within an area affected by Radon	N/A
Ground Gases/Vapours		Methane, carbon dioxide	Low to Moderate

9.1.2 Off-Site Sources

The site may be impacted by contamination migrating from beyond the site boundary. The following potential off-site sources have been identified.

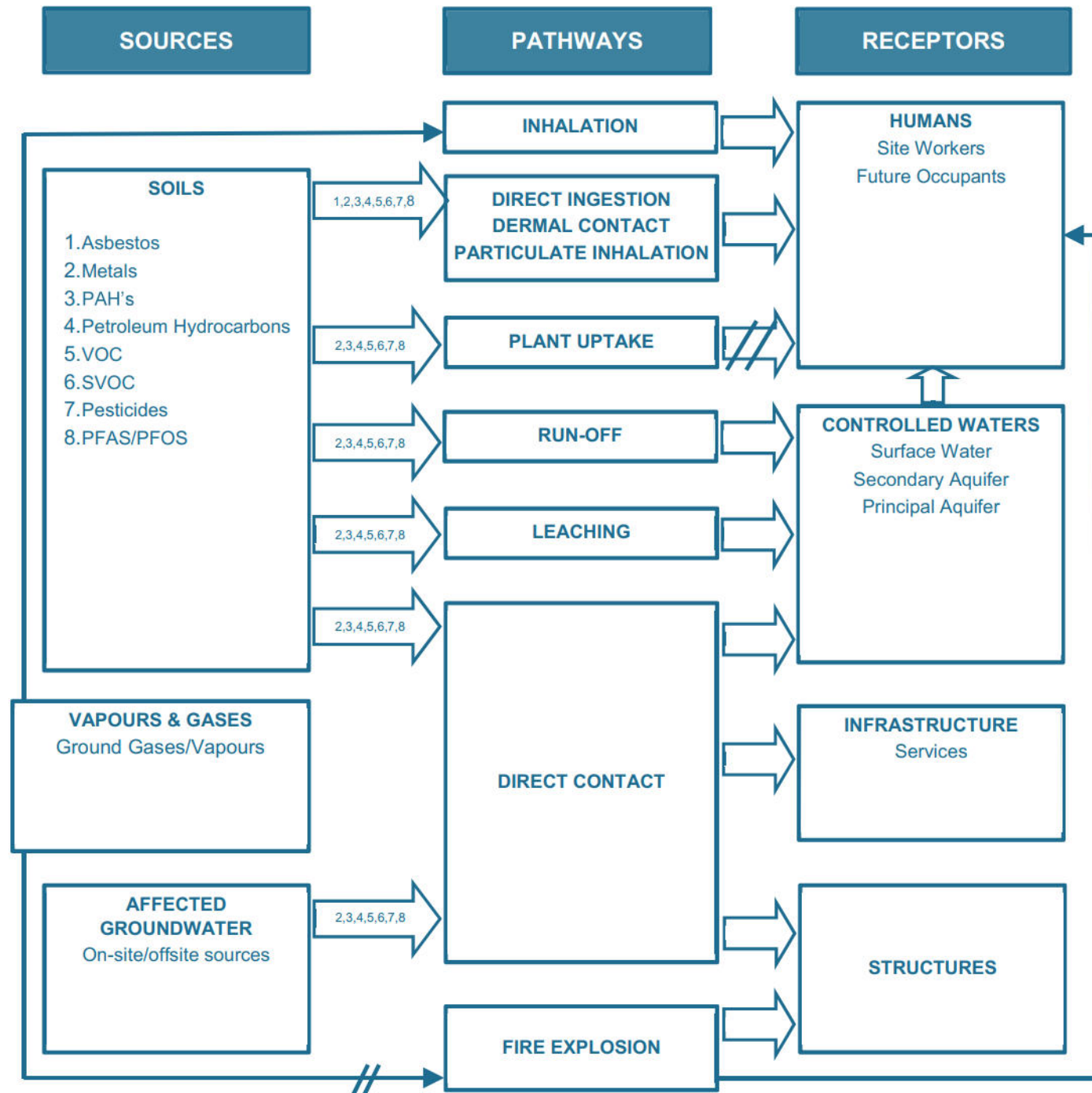
Potential Source	Distance from Site Boundary	Direction	Potential Contaminants	Likely hazard to Site
Engineering/motor mechanic, haulage workshops activities	13 / 19 / 33 / 72 / 80 / 149	S / E / E / NW / SW / N	Metals, petroleum hydrocarbons, VOCs/SVOCs and PAHs.	Low to Moderate

Only mobile phase contaminants from these sources could impact the site. The main pathway for these potential contaminants to migrate and impact on the site would be through groundwater or vapour/land gas.

The nature of the shallow soils of the River Terrace Deposits and the groundwater flow regime (direction and depth) is unknown. The potential for any contaminants associated with these off site sources impacting the site could not be discounted without further investigation.

9.2 Pollutant Linkages and Conceptual Site Model Summary

The following diagram shows the potential pollutant linkages identified for the site and summarises the preliminary conceptual model:



// Denotes potential pollutant linkage not complete.

10 Conclusions and Recommendations

The preliminary conceptual understanding of the site indicates that potentially contaminative activities have been carried out on the site and in the immediate surrounding areas. There is potential that the identified contaminants associated with these activities may have affected the soil and groundwater. There is potentially a Moderate to High risk to the proposed development from the identified on-site sources of contamination.

It is recommended that a site investigation is carried out to determine whether any contamination on site constitutes a risk to human health, groundwater and the as-built environment. This investigation should comprise construction of boreholes and/or excavation of trial pits, with the sampling and analysis of underlying shallow soil material and monitoring of ground gas/water in order to assess the nature and extent of soil, water and gas contamination at the site. The intrusive investigation could also be used to assess the ground conditions and to provide a ground bearing capacity and other geotechnical parameters for foundations design and infiltration potential of the underlying soils.

REFERENCES

- [1] Environment Agency, "Updated technical background to the CLEA model," 2009.
- [2] Contaminated Land: Applications in Real Environments (CL:AIRE), "Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination," 2014.
- [3] CIRIA, "C665 Assessing risks posed by hazardous ground gases to buildings," 2007.
- [4] British Geological Survey (BGS), "Scanned Maps Portal," [Online]. Available: <http://www.bgs.ac.uk/data/maps/home.html>.
- [5] British Geological Survey (BGS), "Geology of Britain Viewer," [Online]. Available: <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>.
- [6] British Geological Survey (BGS), "Hydrogeology Maps of the UK," [Online]. Available: http://www.bgs.ac.uk/research/groundwater/datainfo/hydromaps/hydro_maps_scanviewer.html.
- [7] British Geological Survey (BGS), "Borehole Scans," [Online]. Available: <http://www.bgs.ac.uk/data/boreholescans/home.html>.
- [8] MAGIC partnership organizations, "MAGIC," [Online]. Available: <https://magic.defra.gov.uk/>.
- [9] Environment Agency (GOV.UK website), "Long Term Flood Risk Information," [Online]. Available: <https://flood-warning-information.service.gov.uk/long-term-flood-risk/>.
- [10] Public Health England, "UK Radon Maps," [Online]. Available: <http://www.ukradon.org/information/ukmaps>.
- [11] Building Research Establishment (BRE), "BR211 Radon Guidance on protective measures for new buildings," 2015.
- [12] Ove Arup on behalf of the Department of Environment, "Review Of Mining Instability In Great Britain," 1990.
- [13] CIRIA, "C681 Unexploded Ordnance (UXO) A guide for the construction industry," 2009.
- [14] BSI Standards, "Eurocode 7 Geotechnical Design," 2013.

APPENDIX A

Site Plan





Contains Ordnance Survey Data © Crown Copyright and Database Right 2025

Site:	Bairds Business Park, Grevatt's Lane, Littlehampton	Project ID	JT0642
Figure 1	Site Location Plan	Date:	20/08/2025



NB: Positions of exploratory holes / test positions are only indicative unless dimensioned.

Site:	Bairds Business, Littlehampton BN17 5RX	Project ID	JT0642
Figure 2	Photograph Locations	Date:	02/08/2025

APPENDIX B

Photographs

B

JT0642 Littlehampton



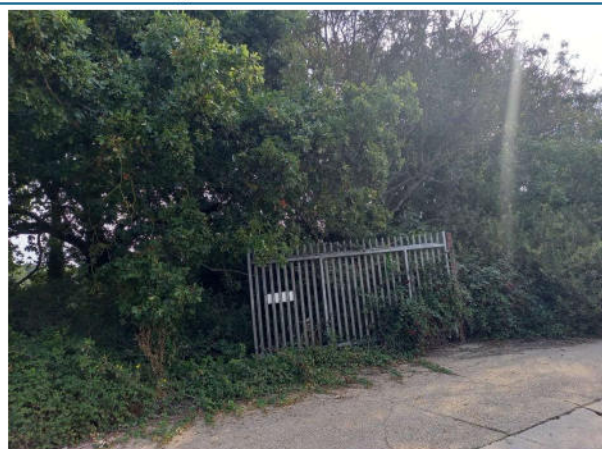
1. Eastern site boundary with large stockpile beyond



2. Materials in stockpile which encroaches onto site from the south

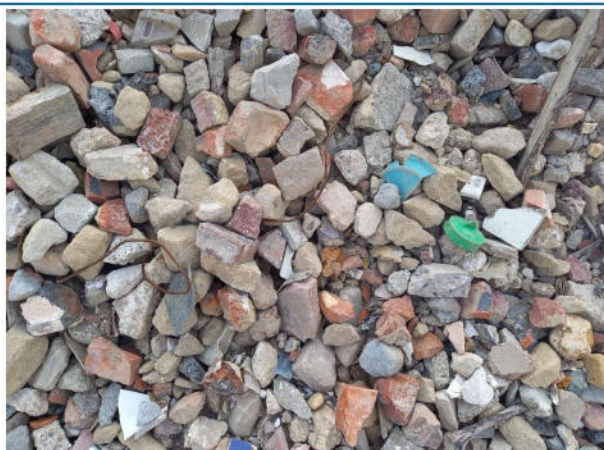


3. Northern part of the site comprising concrete hardstanding



4. Off site to the north - boundary woodland

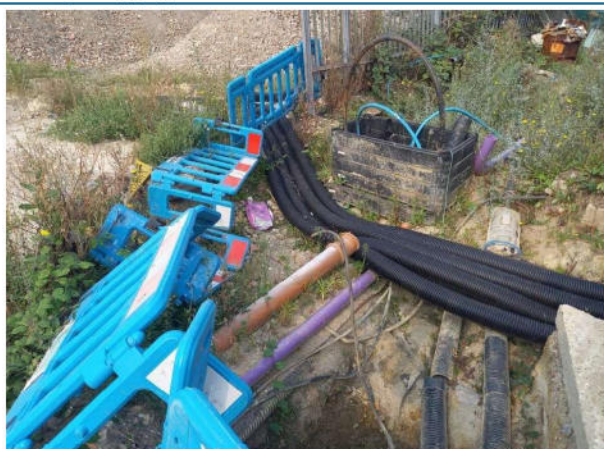
JT0642 Littlehampton



5. Recycled aggregate detail



6. Recycled aggregate stockpiles in centre-east of site



7. Services cut-off in north of site



8. Site eastern boundary partly formed from reaction wall sections

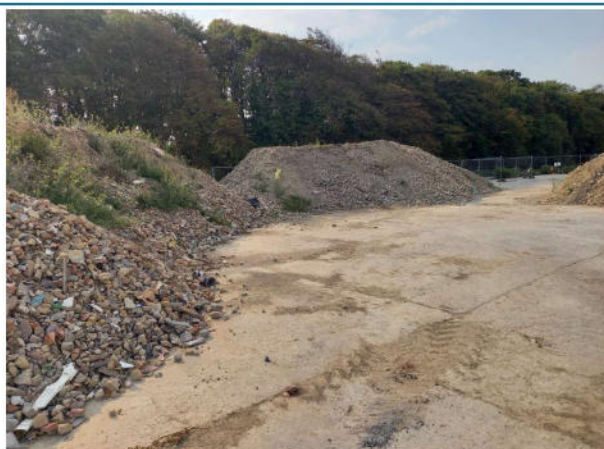
JT0642 Littlehampton



9. Soil stockpile which encroaches onto site from the south



10. Stockpile materials detail

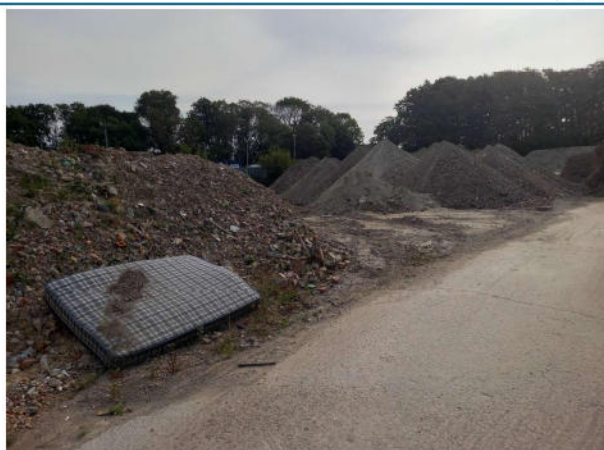


11. Stockpiles centre east of site



12. Stockpiles centre-west of site

JT0642 Littlehampton



13. View east into site from western entrance



14. View from site centre towards the north



15. View north-east into site from western site entrance



16. View south boundary with Woody's yard (off-site stockpile in background)

JT0642 Littlehampton



17. View south into site from concrete hardstanding area in the north



18. View south-east into site from eastern site entrance



19. View south-west into site from concrete area in the north

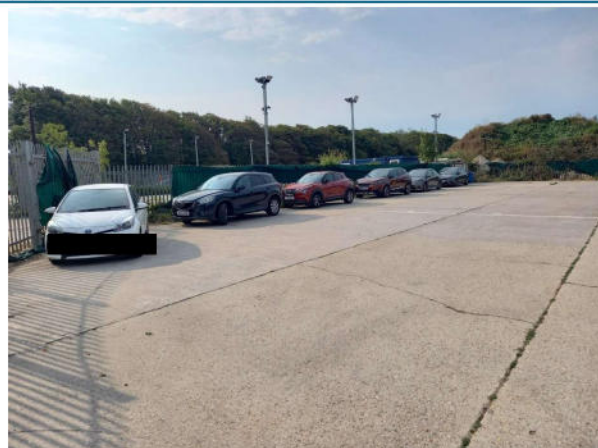


20. View west from south-east corner to the off-site stockpile

JT0642 Littlehampton



21. View west towards access road from the east



22. Woody's yard off site to the north



23. Woody's yard off site to the north